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Mr. Jean François BURTIN

CABINET GEFIB
85 Rue Anatole France
92300 LEVALLOIS PERRET
FRANCE

Tokyo, November 1, 2002

Your Ref: BJ3-021202-JFB/VT
Our Ref: ST-0028

Re: Translation of JP-A1-4-126057 (SATO Tadayuki)

Dear Mr. Jean François BURTIN,

Thank you for your letter dated October 25, 2002 in which we were requested to translate the titled Japanese patent publication.

JP-A1-4-126057 (SATO Tadayuki) was prepared by inventor (not by patent attorney) and hand-written (not typed) so that the specification is terrible. This application was examined but rejected and no appeal was filed.

Attached herewith please find an essence of this publication (complete translation is difficult because there are several contradictory descriptions and no data is given to support claim 1). In any way, the specification contains no other information than this essence.

If you have any question and if you need further information, please don't hesitate to ask us. In the meantime enclosed herein please find our debit note concerning the present our service.

Very truly yours,

T. Koshiba

Attached
1) An essence of JP-A1-4-126057 (SATO Tadayuki)
2) JP-A1-4-126057
3) Our debit note (by separate mail)

0475518115

MHM à JF BURTIN :

voici quelques références concernant la préparation du « brine ». En espérant que cela répondra à votre question.

1/11 EPPATENT - (C) Questel.Orbit
PN - EP1202931 A1 20020508 [EP1202931]
AP - EP00956184 20000713 [2000EP-0956184]
PPN - WO0104052 - 20010118 [WO200104052]
PAP - WOEP0006706 20000713 [2000WO-EP06706]
PR - DE19932955 19990714 [1999DE-1032955]
BPN - 2002-19
GAZ - 2001-03
ET - METHOD OF PREPARING *BRINE* AND ALKALI HALIDES, OBTAINED FROM A METHOD OF PREPARING *BRINE*
IC1 - C01D-003/14
IC2 - C01D-003/06 C01D-003/16
DS - AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT
- AL LT LV MK RO SI
PNDS- AT BE CH DE DK ES FR GB GR IT LI LU NL MC PT IE SI LT LV FI RO MK CY AL
PA - Salinen Austria Gesellschaft m.b.H. / Wirerstrasse 10 / A-4820 Bad Ischl (AT)
- Salinen Austria AG / Wirerstrasse 10 / 4820 Bad Ischl (AT) (Updated 2002-24)
IN - SCHLESINGER, Robert / Peterhofgasse 18 / A-4210 Engerwitzdorf (AT)
- SAMHABER, Wolfgang / Im Turmfeld 8 / A-4060 Leonding (AT)
- SCHWAIGER, Herbert / Steinkogelstrasse 7b / A-4802 Ebensee (AT)
- KRENN, Karl / Bahnhofstrasse 1 / A-4802 Ebensee (AT)
RP - Graf von Stosch, Andreas, Dr. / Bosch - Graf v. Stosch - Jehle Theatinerstrasse 8 / 80333 M□nchen (DE)
DRR - 2002-05-08 Search report
RR - Cited in the search report
- See references of WO 0104052A1
BRR - 2002-19
DREX- 2002-02-14 Request for examination (Updated 2002-19)
PNL - De
APL - De
PCL - De

2/11 EPPATENT - (C) Questel.Orbit- image
PN - EP959043 A1 19991124 [EP-959043]
AP - EP98810457 19980518 [1998EP-0810457]
BPN - 1999-47
ET - Process for treating a sodium chloride solution contaminated with sulphate, especially an anolyte *brine*
PNAB- Bei dem Verfahren zur Aufbereitung einer mit Sulfat befrachteten Kochsalzloesung wird diese als Ausgangsloesung (A) folgender Behandlung unterzogen: a) Eindampfen von mindestens eines Teils (A1) der Ausgangsloesung unter Bildung von NaCl-Partikeln mittels einer Teilkristallisation (11) sowie Separieren eines Gemisches (S1), das Feststoffe enthält, so dass eine zweite Loesung (C) entsteht, die weitgehend feststofffrei ist; b) Entfernen von Sulfat in Form von Na2 SO4 aus der zweiten Loesung nach einer weiteren Teilkristallisation (12), bei der Na2 SO4 -Partikel erzeugt werden, so dass eine feststofffreie dritte Loesung (A3) entsteht; c) Zusammenfuehren des in Schritt a) separierten Gemisches mit der dritten Loesung und Wiederloesen der NaCl-Partikel des Gemisches zur Erzeugung einer Produktloesung.
IC1 - C01D-003/16
IC2 - B01D-009/00
EC - C01D-003/16
DS - AT BE CH DE ES FR GB IT LI NL (Updated 2000-31)
PNDS- AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
PA - CT Umwelttechnik GmbH / Escher-Wyss-Strasse 25 / 88212 Ravensburg (DE)
- MESSO AG / Neuwiesenstrasse 15 / 8401 Winterthur (CH) (Updated 2002-11)
IN - Hantelmann, Harald / Zogenweiler 224 / 88263 Horgenzell (DE)
RP - VA TECH Patente GmbH / Serravagasse 10 / 1140 Wien (AT) (Updated 2001-12)

DRR - 1999-11-24 Search report
RR - Cited in the search report
- GB1139625(A)(Cat. X); EP492727(A)(Cat. A)
- HUANG, JUEMIN: "A new technical process for the joint production of sodium chloride and sodium sulfate" SYMP. SALT, [PROC.] (1993), 7TH(VOL. 2), 165-9 CODEN: SSAPDY;ISSN: 0277-4267, Bd. II, 1993, Seiten 165-169, XP002080274(Cat. X)
- CHEMICAL ABSTRACTS, vol. 95, no. 20, 16. November 1981 Columbus, Ohio, US; abstract no. 171970, TSURUMI SODA CO., LTD., JAPAN: "Refining of sodium chloride solution containing mirabilite from sodium hydroxide manufacturing process" XP002080275 & JP 56 032252 A (TSURUMI SODA CO., LTD., JAPAN)(Cat. A)
BRR - 1999-47
DREX- 2000-04-27 Request for examination (Updated 2000-26)
DNEX- 2000-09-22 First examination report (Updated 2000-45)
PNL - De
APL - De
PCL - De

3/11 EPPATENT - (C) Questel.Orbit- image
PN - EP945099 A1 19990929 [EP-945099]
AP - EP99101716 19990210 [1999EP-0101716]
PR - ITTO980109 19980212 [1998IT-TO000109]
BPN - 1999-39
ET - Improved device for preparing *brine* for use in an electric household appliance
PNAB- The device for the preparation of brine for the regeneration of substances used to reduce the hardness of water supplied to an electric household appliance, in particular, a dishwashing machine, includes a salt container (16) having a water inlet duct (20) connected to the water supply circuit for the electric household appliance and an outlet duct (22) for the brine solution formed in the container (16) after the water has come into contact with the salt. The inlet duct (20) opens into the top of the container (16) and is preferably rigid and a gasket (29) is fitted between it and a rigid outlet duct (27) from a water collection chamber (14).
IC1 - A47L-015/42
IC2 - B01J-049/00 D06F-039/00
EC - A47L-015/42D
- B01J-049/00R2
DS - DE (Updated 2000-24)
PNDS- AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
PA - BITRON S.p.A. / Piazza Camandona 29 / 10042 Nichelino (Torino) (IT)
IN - Brignone, Enzo / Via centallo, 29 / 12025 Frazione Monastero Dronero (Cuneo) (IT)
RP - Gerbino, Angelo / c/o JACOBACCI & PERANI S.p.A. Corso Regio Parco, 27 / 10152 Torino (IT)
DRR - 1999-09-29 Search report
RR - Cited in the search report
- DE4135820(A)(Cat. X); DE2947482(A)(Cat. X); DE3703254(A)(Cat. Y); DE19603619(A)(Cat. Y); DE3622020(A)(Cat. A)
BRR - 1999-39
DDWD- 2000-03-30 Deemed to be withdrawn (Updated 2001-01)
PNL - En
APL - It
PCL - En

4/11 EPPATENT - (C) Questel.Orbit- image
PN - EP914859 A1 19990512 [EP-914859]
AP - EP98870234 19981103 [1998EP-0870234]
PR - BE9700881 19971104 [1997BE-00000881]
BPN - 1999-19
FT - Dispositif de saumure
PNAB- Brine device, in particular for making brine (7) for regenerating the active medium (4) of one or several water softening appliances (2), consisting of a reservoir (9) in which salt (10) to be solved can be provided and onto which water can be supplied and from which brine (7) can be extracted, characterized in that this brine device (1) is provided with a float mechanism (11) and with sealing means (12)

working in conjunction with it via a mechanical coupling (19), such that the latter prevent the level (13) in the reservoir (9) from dropping underneath a certain mark (N2) as the brine (7) is extracted, such that a stock buffer of brine, preferably saturated brine, remains available.

ECLM- Brine device, in particular for making brine (7) for regenerating the active medium (4) of one or several water softening appliances (2), consisting of a reservoir (9) in which salt (10) to be solved can be provided and onto which water can be supplied and from which brine (7) can be extracted via an opening (17), whereby this brine device (1) is provided with a float mechanism (11) and with sealing means (12) for closing off said opening (17), working in conjunction with the float mechanism via a mechanical coupling (19), characterized in that the float mechanism (11) and the sealing means (12) are in such a mutual position that the level (13) in the reservoir (9) is prevented from dropping underneath a certain level or mark (N2) as the brine (7) is extracted, such that a stock buffer of brine, preferably saturated brine, remains available above said opening (17), whereby the stock buffer is sufficient that at least when two water softening appliances are connected to the brine device, concentration of brine will always exceed 60%.

FCLM- Dispositif de *pr,paration* de saumure, en particulier pour pr,parer de la saumure (7) destin,e ... r,g,n,rer le milieu actif (4) d'un ou de plusieurs appareils d'adoucissement de l'eau (2) constitu, d'un r,servoir (9) dans lequel du sel (10) qui doit ^tre dissous peut ^tre achemin,, de l'eau pouvant ^tre aliment,e sur ledit sel, et ... partir duquel de la saumure (7) peut ^tre extraite via une ouverture (17), par lequel ce dispositif de *pr,paration* de saumure (1) est muni d'un m,canisme de flottement (11) et d'un moyen d',tanch,isation (12) destin, ... obturer ladite ouverture (17) travaillant de manišre coordonn,e avec le m,canisme de flottement via un couplage m,canique (19), caract,ris, en ce que le m,canisme de flottement (11) et le moyen d',tanch,isation (12) sont dispos,s dans une position r,ciproque telle que l'on emp^che le niveau (13) dans le r,servoir (9) de chuter en dessous d'un certain niveau ou d'un certain repšre (N2) lorsque la saumure (7) est extraite, de telle sorte qu'une matišre tampon de saumure, de pr,f,rence de saumure satur,e reste disponible au-dessus de ladite ouverture (17), par lequel la matišre tampon est suffisante pour que, au moins lorsque deux appareils d'adoucissement de l'eau sont connect,s au dispositif de *pr,paration0 de saumure, la concentration de la saumure soit toujours sup,rieure ... 60 %.

IC1 - B01F-001/00
IC2 - B01J-049/00
EC - B01F-001/00
- B01J-049/00R2
DS - BE DE FR GB IT (Updated 2001-31)
PNDS- AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
PA - Padema, Naamloze Vennootschap / E. De Coussemakerstraat 35 / 2050 Antwerpen (BE)
IN - Van de Moortele, Guido I.C.M. / Edmond de Coussemakerstraat 35 / 2050 Antwerpen (BE)
RP - Donn,, Eddy / Bureau M.F.J. Bockstael nv Arenbergstraat 13 / 2000 Antwerpen (BE)
DRR - 1999-05-12 Search report
RR - Cited in the search report
- US3530876(A)(Cat. X); US3574559(A)(Cat. X)
BRR - 1999-19
DREX- 1999-11-08 Request for examination (Updated 2000-01)
DNEX- 2000-02-15 First examination report (Updated 2000-13)
DGR - 2001-08-01 Grant (Updated 2001-31)
BGR - 2001-31 (Updated 2001-31)
NGR - B1 (Updated 2001-31)
DNOP- 2002-05-03 No opposition (Updated 2002-30)
DNTF- 2001-12-28 B1 GRANTED (Updated 2002-04)
DLP - 2001-08-01(BE) (Updated 2002-29)

- 2001-12-26(FR) (ated 2002-29)
PNL - En
APL - En
PCL - En

5/11 EPPATENT - (C) Questel.Orbit- image
PN - EP722769 A1 19960724 [EP-722769]
AP - EP95119676 19951214 [1995EP-0119676]
PR - DE9420713U 19941224 [1994DE-U020713]
BPN - 1996-30
ET - Installation for preparing *brine*
FT - Installation pour la *pr,paration* de saumure
GT - Einrichtung zur Zubereitung von Sole
PNAB- Die Einrichtung zur Zubereitung von Sole fuer die Pr'parierung von Strassenoberfl'chen bei winterlichen Vereisungsgefahren umfasst eine Vorrichtung zum Mischen von Salz und Wasser und einen mit der fertigen Sole beschickbaren Vorratsbeh'lter (9). Zur chargenweisen Solezubereitung ist ein mit Salz und Wasser beschickbarer, mit Ruehrwerk (2) versehener Wiegemischbeh'lter (1) vorgesehen, dessen Auslass (6) ueber eine mit einer Foerderpumpe (7) versehene Foerderleitung (8) mit dem Vorratsbeh'lter (9) verbunden ist. Der Auslass des Vorratsbeh'lters (9) ist an eine mit einer Foerderpumpe (11) versehene Entnahmeleitung (12) angeschlossen, aus der eine zum Vorratsbeh'lter (9) und zum Wiegemischbeh'lter (1) fuehrende und mit diesen wahlweise verbindbare Ruecklaufleitung (13) abgezweigt ist.
ECLM- An apparatus for preparing brine for the *preparation* of road surfaces
against the dangers of icing in winter, with a device for mixing salt and water and a storage container adapted to be filled with the prepared brine, characterised in that for the *preparation* of batches
of brine, a weighing and mixing container (1) which can be charged with salt and water and which is fitted with an agitating mechanism (2) is provided, the outlet (6) from the weighing-mixing container (1) is connected to the storage container (9) via a delivery pipe (8) fitted with a delivery pump (7), the outlet of the storage container (9) being connected to a draw-off pipe (12) provided with a delivery pump (11) and from which a return pipe (13) leading to the storage container (9) and to the weighing-mixing container (1) is branched off and can be selectively connected to them.
IC1 - B01F-001/00
IC2 - B01F-003/12 E01H-010/00
EC - B01F-003/12P
DS - AT BE CH DE DK FR LI NL SE (Updated 1999-34)
PNDS- AT BE CH DE DK FR LI NL SE
PA - WEDA-DAMMANN & WESTERKAMP GmbH / Am Bahnhof 3 / 49424 Lutten (DE)
IN - Fahlbusch, Klaus / Paul-Keller-Strasse 19 / D-49377 Vechta (DE)
RP - Busse & Busse Patentanw'lte / Postfach 12 26 / 49002 Osnabrueck (DE)
DRR - 1996-07-24 Search report
RR - Cited in the search report
- FR2517984(A)(Cat. A); DE2625066(A)(Cat. A); EP145705(A)(Cat. A); DE8520541(U)(Cat. A)
- Cited by applicant
- None
BRR - 1996-30
DREX- 1996-09-06 Request for examination (Updated 1996-45)
DNEX- 1997-11-11 First examination report (Updated 1997-52)
DGR - 1999-08-25 Grant (Updated 1999-34)
BGR - 1999-34 (Updated 1999-34)
NGR - B1 (Updated 1999-34)
DNOP- 2000-05-26 No opposition (Updated 2000-32)
DTF - 1999-11-05 B1 GRANTED
DLP - 1999-12-31(BE) (Updated 2001-08)
PNL - De
APL - De
PCL - De

6/11 EPPATENT - (C) Questel.Orbit- image
PN - EP584875 A1 19940302 [EP-584875]
AP - EP93202461 19930821 [1993EP-0202461]

PR - BE9200761 19920[illegible] [1992BE-0000761]
BPN - 1994-09
ET - Device for making *brine*.
PNAB- Device for making brine, consisting of a brine bin (2) with an inlet (3) for water and an outlet (4) for brine (5), characterized in that the inlet (3) for the water and the outlet (4) for the brine (5) are situated at different places in the brine bin (2). (see diagramm 1 page 0)
IC1 - B01F-001/00
EC - B01F-001/00
- B01J-049/00R2
DS - DE FR GB IT
PNDS- DE FR GB IT
PA - DOTRACO, naamloze vennootschap / E. De Coussemakerstraat 35 / B-2050 Antwerpen (BE)
IN - Van de Moortele, Guido / E. De Coussemakerstraat 35 / B-2050 Antwerpen (BE)
RP - Donn,, Eddy / Bureau M.F.J. Bockstael nv Arenbergstraat 13 / B-2000 Antwerpen (BE)
DRR - 1994-03-02 Search report
RR - Cited in the search report
- US4026673(A)(Cat. X); NL7114100(A)(Cat. X)
BRR - 1994-09
DDWD- 1994-09-03 Deemed to be withdrawn (Updated 1995-25)
PNL - En
APL - Nl
PCL - En

7/11 EPPATENT - (C) Questel.Orbit
PN - EP470940 A2 19920212 [EP-470940]
AP - EP91850179 19910626 [1991EP-0850179]
PR - US56420290 19900808 [1990US-0564202]
BPN - 1992-07
ET - A method and a device for preparing *brine*.
PNAB- The invention concerns a method of preparing brine from sodium chloride salt containing one or more water-soluble impurities having an aqueous dissolution rate lower than that of sodium chloride, the method comprising the steps of: (a) forming a salt bed in a vessel, the vessel including a grid for supporting the salt bed; (b) wetting at least a portion of the salt bed with a flow of water; (c) forming a brine solution by at least partially dissolving the wetted portion of the salt bed in the water; (d) forming small solid particles in the wetted portion of the salt bed, said small particles containing one or more water-soluble impurities but substantially no sodium chloride; (e) passing the brine and the small solid particles containing soluble impurities through the grid and out of the salt bed; (f) separating the brine from the small solid particles.
- The invention also concerns a device for making brine by dissolving salt in water, which device comprises a vessel (3) containing a grid support (4), means (2, 23) for supplying solid salt (1), means (32, 42) for supplying water, means (14, 15) for the outflow of brine, and means (9) for removing undissolved salt particles (8) at the bottom of the vessel (3). (see diagramm 1 page 0)
ECLM- A method of preparing brine from sodium chloride salt containing one or more water-soluble impurities having an aqueous dissolution rate lower than that of sodium chloride, comprising the steps of:
- (a) forming a salt bed in a vessel, the vessel including a grid for supporting the salt bed;
- (b) wetting at least a portion of the salt bed with a flow of water;
- (c) forming a brine solution by at least partially dissolving the wetted portion of the salt bed in the water;
- (d) forming small solid particles in the wetted portion of the salt bed, said small particles containing one or more water-soluble impurities but substantially no sodium chloride;
- (e) passing the brine and the small solid particles containing soluble impurities through the grid and out of the salt bed;
- (f) separating the brine from the small solid particles; in that the water in step (b) is supplied through a plurality of spray nozzles distributed throughout the wetted portion of the salt bed.

IC1 - C01D-003/08
EC - C01D-003/08
DS - DE ES FR SE (Updated 1995-21)
PNDS- DE ES FR SE
PA - EKA NOBEL AB / / S-445 01 Bohus (SE)
IN - Tewari, Mohan Prasad / 636 31st Ave. N., Apt. 137 / Columbus, MS 39701 (US)
RP - Sch"ld, Zaid / Nobel Industries Sweden AB Patent Department Box 11554 / S-100 61 Stockholm (SE)
DRR - 1992-04-29 Search report (Updated 1992-18)
RR - Cited in the search report
- US3168379(A)(Cat. X); US3385674(A)(Cat. A); US2734804(A)(Cat. A)
BRR - 1992-18 (Updated 1992-18)
DREX- 1992-09-17 Request for examination (Updated 1992-48)
DNEX- 1993-08-17 First examination report (Updated 1993-39)
DGR - 1995-05-24 Grant (Updated 1995-21)
BGR - 1995-21 (Updated 1995-21)
NGR - B1 (Updated 1995-21)
DNOP- 1996-05-15 No opposition (Updated 1996-20)
DTF - 1995-06-09 B1 GRANTED
PNL - En
APL - En
PCL - En

8/11 EPPATENT - (C) Questel.Orbit
PN - EP427972 A1 19910522 [EP-427972]
AP - EP90119932 19901017 [1990EP-0119932]
PR - US43717789 19891116 [1989US-0437177]
BPN - 1991-21
ET - Purification of chlor-alkali membrane cell *brine*.
PNAB- This invention relates to methods and systems for purifying brine for electrolysis in chlor-alkali cells, especially membrane cells by reduceing the sulfate ion concentration, while at the same time minimizing the concentration of other undesireable ions such as calcium and chlorate. The methods and systems employed are unique combinations of refrigeration and crystalization, and brine recirculation techniques in the systems for electrolyzing brine.
ECLM- A method for reducing calcium and sulfate ion concentration from brine for use in chlor-alkali membrane cell plant installations, comprising
- (1) preparing a concentrated aqueous solution of salt to make brine,
- (2) subjecting the brine to refrigeration and crystallization to precipitate Glauber's salt, and
- (3) mixing the precipitated Glauber's salt with an aqueous solution to be used for preparing the solution in (1), wherein the aqueous solution is depleted brine resulting from the membrane cell plant installations.
IC1 - C01D-003/14
EC - C01D-003/14
- C25B-015/08
DS - DE FR GB IT NL SE (Updated 1994-33)
PNDS- DE FR GB IT NL SE
PA - Texas Brine Corporation / 2000 West Loop South / Houston Texas 77027 (US)
- Texas Brine Corporation / 4800 San Felipe / Houston Texas 77056 (US) (Updated 1993-39)
IN - Rutherford, John / 761 Brenda Court / Punta Gorda, Florida 33950 (US)
- Ver Hoeve, Raymond W. / 4731 Ivanhoe / Houston, Texas 77027 (US)
RP - Kraus, Walter, Dr. et al / Patentanw'lte Kraus, Weisert & Partner Thomas-Wimmer-Ring 15 / W-8000 Muenchen 22 (DE)
DRR - 1991-05-22 Search report
RR - Cited in the search report
- CHEMICAL ABSTRACTS, vol. 109, no. 10, 5th Septembre 1988, page 162, left-hand column, abstract no. 76148u, Columbus, Ohio, US; ANON.: "Process for elimination of sulfate contamination of chlorate electrolyte", & RES. DISCL. 1988, 289, 279(Cat. A)
- CHEMICAL ABSTRACTS, vol. 93, no. 3, 21st July 1980, page 140, left-hand column, abstract no. 206951q, Columbus, Ohio, US; V.I. MAKSIN et al.: "Crystallization of sodium sulfate from brines formed after the demineralization of mine water", & KHIM. TEKHNOL. VODY 1979,

1(2), 66-9(Cat.
- CHEMICAL ABSTRACTS, vol. 91, no. 2, 9th July 1979, page 118, left-hand column, abstract no. 7093v, Columbus, Ohio, US; & JP-A-79 01 298 (TSURUMI SODA CO.) 08-01-1979(Cat. A)
BRR - 1991-21
DREX- 1991-11-07 Request for examination (Updated 1992-02)
DNEX- 1992-08-12 First examination report (Updated 1992-40)
DGR - 1994-08-17 Grant (Updated 1994-33)
BGR - 1994-33 (Updated 1994-33)
NGR - B1 (Updated 1994-33)
DNOP- 1995-08-09 No opposition (Updated 1995-32)
DTF - 1994-10-14 B1 GRANTED
DLP - 1994-11-17 (SE) (Updated 1995-29)
PNL - En
APL - En
PCL - En

9/11 EPPATENT - (C) Questel.Orbit
PN - EP170371 A2 19860205 [EP-170371]
AP - EP85304024 19850606 [1985EP-0304024]
PR - US63643684 19840731 [1984US-0636436]
BPN - 1986-06
ET - Corrosion inhibited *brine* composition, method of making same, and method of inhibiting corrosion and decreasing corrosiveness
PNAB- A corrosion-inhibiting composition including an aqueous solution of at least one alkali or alkaline earth metal halide and a corrosion-inhibiting amount of zinc and thiocyanate ions for use in well drilling, completion, packer fluid and workover operations.
IC1 - C23F-011/18
IC2 - C09K-007/02
EC - C09K-007/02
- C23F-011/18M
DS - AT CH LI DE FR GB NL SE
PA - THE DOW CHEMICAL COMPANY / 2030 Dow Center Abbott Road P.O. Box 1967 / Midland, MI 48640 (US)
- THE DOW CHEMICAL COMPANY / 2030 Dow Center / Midland, Michigan 48674 (US) (Updated 1998-02)
IN - Doty, Peter A. / 1977 Poseyville Road / Midland Michigan 48640 (US)
- Larson, William A. / 1409 Corrine / Midland Michigan 48640 (US)
RP - Raynor, John et. al / W.H. Beck, Greener & Co 7 Stone Buildings Lincoln's Inn / London WC2A 3SZ (GB)
DRR - 1986-11-26
RR - Cited in the search report
- GB2027686(A)(Cat. X,D); GB903937(A)(Cat. Y,D); US2073413(A)(Cat. A)
- CORROSION, vol. 38, no. 5, May 1982, pages 261-265, National Association of Corrosion Engineers, Houston, Texas, US; R.C. NEWMAN et al.: "Effects of sulfur compounds on the pitting behavior of type 304 stainless steel in near-neutral chloride solutions"(Cat. Y)
BRR - 1986-48
DDWD- 1994-01-04 Deemed to be withdrawn (Updated 1994-44)
DREX- 1986-12-18 Request for examination
DNEX- 1988-01-19 First examination report (Updated 1988-09)
PNL - EN
APL - EN
PCL - EN

10/11 EPPATENT - (C) Questel.Orbit- image
PN - EP145705 A2 19850619 [EP-145705]
AP - EP84890234 19841203 [1984EP-0890234]
PR - AT423383 19831205 [1983AT-0004233]
- AT423483 19831205 [1983AT-0004234]
BPN - 1985-25
ET - Installation for the production of *brine*
ECLM- 1. A *preparation* installation for the production of a brine from solid thawing substance which is to be mixed with a solvent, comprising a filling container (3) which has a filling opening (5) for the solid thawing substance, a mixing container (2), wherein the receiving space of the filling container (3) is separated from the mixing space of the mixing container (2) by a wall provided with through openings through

which the brine [redacted] rlow, and a selectively actua[redacted] pump (10) which circulates the liquid contained in the mixing container (2) or transfers it from the mixing container (2) into a storage container (1) characterised in that the storage container (1) is arranged on the mixing container (2) and that the filling container (3) is provided at a side wall of the mixing container (2).

IC1 - B01F-001/00
IC2 - B01F-007/18 B01F-005/10 B01F-015/06
EC - B01F-003/12C
- B01F-005/10
- B01F-015/00P
DS - AT BE CH DE FR GB IT LI LU NL SE (Updated 1989-39)
PA - Kahlbacher, Anton / Aschbachstrasse 8 / A-6370 Kitzbuehel (AT)
IN - Kahlbacher, Anton / Aschbachstrasse 8 / A-6370 Kitzbuehel (AT)
RP - Torggler, Paul Dr. et. al / Wilhelm-Greil-Strasse 16 / A-6020 Innsbruck (AT)
DRR - 1987-03-04 Search report
RR - Cited in the search report
- DE1071602(B)(Cat. X); GB1188335(A)(Cat. X); DE278120(C)(Cat. X) ; FR455734(A)(Cat. X); DE1174745(B)(Cat. A); US3612080(A)(Cat. A) ; AT351074(B)(Cat. A,D); DE2402081(A)(Cat. A); DE1174744(B)(Cat. A) ; DE25775(C)(Cat. A); US2985514(A)(Cat. A); DE1037247(B)(Cat. A)
BRR - 1987-10
DREX- 1987-08-17 Request for examination
DNEX- 1988-04-22 First examination report (Updated 1988-23)
DGR - 1989-09-27 Grant (Updated 1989-39)
BGR - 1989-39 (Updated 1989-39)
NGR - B1 (Updated 1989-39)
DNOP- 1990-09-05 No opposition (Updated 1990-36)
DNTF- 1990-02-16 B1 GRANTED
DLP - 1989-09-27(BE) (Updated 2002-24)
- 1989-09-27(FR) (Updated 2002-24)
- 1989-09-27(GB) (Updated 2002-24)
- 1989-09-27(IT) (Updated 2002-24)
- 1989-12-31(LU) (Updated 2002-24)
- 1989-09-27(NL) (Updated 2002-24)
- 1989-09-27(SE) (Updated 2002-24)
PNL - DE
APL - DE
PCL - DE

11/11 EPPATENT - (C) Questel.Orbit
PN - EP103483 A2 19840321 [EP-103483]
AP - EP83305341 19830913 [1983EP-0305341]
PR - US41741882 19820913 [1982US-0417418]
- US41743982 19820913 [1982US-0417439]
BPN - 1984-12
ET - A method of preparing modified heteropolysaccharides in buffered *brine* and their use for oil recovery
PNAB- A process for preparing modified aqueous saline heteropolysaccharide solutions containing at least 0.5 wt. % of inorganic salts wherein the solutions are stabilized against loss of pyruvate groups on heat treatment. The process comprises preparing an aqueous solution containing heteropolysaccharide and inorganic salts, adding a buffer to control pH between about 6.5 and 10.0, heating to a temperature of at least 100 DEG.C and maintaining the pH at from 6.0 to 9.5 during heating, then removing cell debris. The buffered solutions do not suffer loss of pyruvate content while maintaining improved filterability and viscosity.
IC1 - C12P-019/06
IC2 - E21B-043/25
EC - C12P-019/06
- E21B-043/25B13
DS - DE FR GB
PA - Exxon Research and Engineering Company / P.O.Box 390 180 Park Avenue / Florham Park New Jersey 07932 (US)
IN - Holzwarth, George Michael / 135 Yale Terrace / Linden New Jersey 07036 (US)
RP - Field, Roger Norton et. al / ESSO Engineering (Europe) Ltd. Patents &